UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

JAN 26 1994

OFFICE OF
PREVENTION, PESTICIDES AND
TOXIC SUBSTANCES

MEMORANDUM:

SUBJECT: PP#8F3607: Glufosinate-Ammonium: Request for Method Validation for Parent and Metabolite in/on Animal Tissue Commodities. MRID Nos 425236-02 and -03

FROM: Joel Garbus, PhD., Chemist
Tolerance Petition Section III
Chemistry Branch Tolerance Support (7509C)

THRU: D. E. Edwards, Chief
Chemistry Branch Tolerance Support
Health Effects Division (7509C)

TO: Donald A. Marlow, Chief
Analytical Chemistry Branch
BEAD (7503W)

Hoechst-Celanese has petitioned for permanent tolerances for the herbicide glufosinate-ammonium, (Ignite), and its metabolite, 3-methylphosphinicopropionic acid, in/on almond hulls at 0.5 ppm; apples, grapes and nuts at 0.05 ppm; cattle fat, cattle meat, eggs, goat fat, goat meat, horse fat, horse meat, poultry meat, poultry fat, sheep fat, and sheep meat at 0.05 ppm; cattle mbyp, goat mbyp, horse mbyp, poultry mbyp, and sheep mbyp at 0.10 ppm; and milk at 0.02 ppm. Previous requests for tolerances on soybeans and field corn have been withdrawn. The request for tolerances on animal commodities arises from the potential of feeding almond hulls bearing the requested tolerance level. The requested animal commodities tolerances are based upon extrapolations from animal metabolism studies as animal feeding studies have not been conducted.

CBTS requests that a method validation be initiated for the determination of glufosinate-ammonium and its metabolite in/on animal tissue commodities. The method for animal tissue commodities has been developed and independently validated by the petitioner since the submission of the original petition. The method for plant matrices (apples, grapes, almond nutmeats and hulls, soybeans, and corn grain, fodder and forage) already has been validated by the Agency as it was submitted with the original

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petition. Normally we request method validation at 1x and 2x the requested tolerances. In this instance we have asked for 1x and 5x so as to make the Agency's validation comparable to the petitioner's independent validations.

Samples should be run in duplicate at the suggested fortification levels. (See attached tables.) Copies of the appropriate method, as validated in two independent laboratories are attached.

Please return the requested information on the attached forms, together with other information concerning the method trial that we should be aware of including copies of chromatograms for representative control and tolerance level samples, standard curves, examples of sample calculations, and all data generated by your branch's SOP for method trials.

One of the purposes of conducting a method trial is to determine whether all necessary instructions are included in the submitted method. For this reason we are requesting that laboratory staff scientists not discuss this MTO with the petitioner. Any problems encountered should be documented and included in your report. The registrant will be informed of any deficiencies in the method and asked to resolve them.

Analytical standards are available for glufosinate-ammonium and its metabolite from the EPA repository. The standards and their derivitized forms are also available from Hoechst-Celanese Corp., Somerville, NJ.

Please forward the results of this method try-out to P. Errico, Section Head, Tolerance Petition III, CBTS, HED, (7509C).

attachments:

1) PR Notice 88-5 Enforcement Method Validation for HOE-039866 and Its Metabolite HOE-061517 in Livestock and Poultry Tissues, Milk, and Eggs.

2) Method Validation for the Determination of HOE-039866 and Metabolite HOE-061517 in Meat, Milk, and Eggs.

cc with attachments (copies of method): D. Marlow, M. Clower (FDA HFS-335)

cc without attachment: R.F.; Circ.; M. Bradley (PAM-2 editor); MTO F; Garbus; PP#8F3607

RDI:PE:1/13/94:RAL:1/13/94:DE:1/13/94
7509C:CBTS:JG:jg:1/21/94:CM#2:805b:703 305-5405

MTO REPORT

Commodity	Chemical Added	Level Added ppm	Found ppm	Recovery %
Milk	control			
Milk	glufosinate	0.02		
Milk	glufosinate	0.10		
Milk	Metabolite[1]	0.02		
Milk	Metabolite[1]	0.10		
Eggs	control			
Eggs	glufosinate	0.05		
Eggs	glufosinate	0.25		
Eggs	Metabolite[1]	0.05		
Eggs	Metabolite[1]	0.25		
Beef Muscle	control			
Beef Muscle	glufosinate	0.05		
Beef Muscle	glufosinate	0.25		
Beef Muscle	Metabolite[1]	0.05		
Beef Muscle	Metabolite[1]	0.25		
Beef Liver	control			
Beef Liver	glufosinate	0.10		
Beef Liver	glufosinate	0.50		
Beef Liver	Metabolite[1]	0.10		
Beef Liver	Metabolite[1]	0.50		

[1] Metabolite = 3-methylphosphinicopropionic acid

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Modifications to method (major or minor):

Special precautions to be taken:

Source of analytical reference standards:

If derivitized standard is used, give source:

Instrumentation for quantitation:

Instrumentation for confirmation:

If instrument parameter differ from those given in method, list parameters used:

Commercial sources for any special chemicals or apparatus:

Comments